

目 次

● 泵理论与技术

基于 NSGA-II 算法的水轮机活动导叶多目标优化设计

罗兴铸, 郭鹏程, 朱国俊, 丁 况(369)

不同叶顶间隙下的轴流泵内部流场数值计算

施卫东, 张 华, 陈 斌, 张德胜, 张 磊(374)

轴流泵模型多叶片安放角的数值计算

陈红勋, 朱 兵, 李随波(378)

基于遗传算法的离心泵叶轮参数化造型及优化设计

郭 涛, 李国君, 田 辉, 孙秀玲(384)

离心泵启动过程瞬态特性的试验

李志峰, 吴大转, 王乐勤, 戴维平, 陈丰秋(389)

SXB 型消防用多级泵全流场 CFD 数值模拟

刘建瑞, 张立胜, 向宏杰, 刘亮亮(394)

折边对旋流泵性能影响的数值计算与试验

朱荣生, 苏保稳, 王秀礼, 殷勇钢(398)

基于先进控制流理论的偏置叶片优化方法

贾瑞宣, 徐 鸿(402)

带分流叶片离心泵无过载特性的理论与试验研究

张金凤, 沈艳宁, 袁寿其, 陆伟刚, 袁建平(407)

磁力泵滑动轴承磨损检测

曾 培, 叶子兆, 李永亮, 孔繁余(412)

● 流体工程

新型双向潮汐发电水轮机组性能优化设计

王正伟, 杨校生, 肖业祥(417)

旋转直扩张通道中柱状物的取向数值模拟

张启华, 李月仙, 林建忠(422)

遗传算法的改进及其在流体机械领域的应用

陶海坤, 谭磊, 曹树良(428)

● 泵站工程与给排水

栏目主持人: 仇宝云

南水北调东线泵站变速运行模式的适应性

程吉林, 张仁田, 邓东升, 龚懿, 冯旭松(434)

基于 DPSA 方法的江都四站单机组优化运行

张礼华, 程吉林, 张仁田, 仇锦先, 龚懿(439)

● 节水灌溉工程

基于正交试验的三角环流流道灌水器数值模拟

王新坤, 李俊红, 李亚飞, 许文博(444)

涌泉根灌在黄土坡地的水分运移规律试验

汪有科, 黎朋红, 马理辉, 赵颖娜, 黎朋军(449)

考虑太阳热辐射的混凝土衬砌渠道冻胀数值模拟

王正中, 芦琴, 郭利霞(455)

CONTENTS

- Multi-object optimum design for hydraulic turbine guide vane based on NSGA-II algorithm
..... Luo Xingqi, Guo Pengcheng, Zhu Guojun, Ding Kuang(369)
- Numerical simulation of internal flow field in axial-flow pump with different blade tip clearance sizes
..... Shi Weidong, Zhang Hua, Chen Bin, Zhang Desheng, Zhang Lei(374)
- Numerical calculation of axial-flow pump model with multi-blade stagger angles
..... Chen Hongxun, Zhu Bing, Li Suibo(378)
- Parametric modeling and optimization design of centrifugal pump impeller based on genetic algorithm
..... Guo Tao, Li Guojun, Tian Hui, Sun Xiuling(384)
- Experiment on instantaneous characteristics in centrifugal pump during startup period
..... Li Zhifeng, Wu Dazhuan, Wang Leqin, Dai Weiping, Chen Fengqiu(389)
- CFD numerical simulation of whole flow field for SXB multi-stage fire pump
..... Liu Jianrui, Zhang Lisheng, Xiang Hongjie, Liu Liangliang(394)
- Numerical simulation and experiment of influence of hem on performance of vortex pump
..... Zhu Rongsheng, Su Baowen, Wang Xiuli, Yin Yonggang(398)
- Optimization method for offset splitting blades based on advanced control-flow theory
..... Jia Ruixuan, Xu Hong(402)
- Theory and experiments on non-overload characteristics for centrifugal pump with splitters
..... Zhang Jinfeng, Shen Yanning, Yuan Shouqi, Lu Weigang, Yuan Jianping(407)
- Slide bearing wear monitoring on magnetic drive pump
..... Zeng Pei, Ye Zizhao, Li Yongliang, Kong Fanyu(412)
- Hydraulic performance optimization of bidirectional tidal power turbine
..... Wang Zhengwei, Yang Xiaosheng, Xiao Yexiang(417)
- Numerical simulation of cylinder orientation through a rotating straight expansion duct
..... Zhang Qihua, Li Yuexian, Lin Jianzhong(422)
- Improvement on genetic algorithms and its application in fluid machinery
..... Tao Haikun, Tan Lei, Cao Shuliang(428)
- Adaptability research of optimal operation mode with variable frequency drives for pumping stations
in China's Eastern Route Project of S-to-N Water Diversion
..... Cheng Jilin, Zhang Rentian, Deng Dongsheng, Gong Yi, Feng Xusong(434)
- DPSA method-based optimal operation of single pump unit for Jiangdu No. 4 Pumping Station
..... Zhang Lihua, Cheng Jilin, Zhang Rentian, Qiu Jinxian, Gong Yi(439)
- Numerical calculation of triangle circulation drip irrigation emitters based on orthogonal experiment
..... Wang Xinkun, Li Junhong, Li Yafei, Xu Wenbo(444)
- Experiment on water migration of surge root irrigation in loess sloping fields
..... Wang Youke, Li Penghong, Ma Lihui, Zhao Yingna, Li Pengjun(449)
- Numerical simulation of frost heave of concrete lining channel by taking consideration of radiation
..... Wang Zhengzhong, Lu Qin, Guo Lixia(455)